

PCV5

NON-PERSISTENT USE OF ANTIHYPERTENSIVE DRUGS INCREASES RISK OF HOSPITALIZATIONS FOR STROKE BY NEARLY 20%Breekveldt-Postma NS¹, Siiskonen SJ¹, Penning-van Beest FJA¹, Erkens JA¹, Vincze G², Falvey H², Herings RMC¹¹PHARMO Institute, Utrecht, The Netherlands, ²Novartis Pharma AG, Basel, Switzerland

OBJECTIVES: Low persistence with antihypertensive drug treatment (AHT) is expected to limit patient's benefits in terms of a reduction of cardiovascular and cerebrovascular disease. This study investigated the relationship between persistence with antihypertensive drugs and the risk of stroke in clinical practice. **METHODS:** From the PHARMO Record Linkage System comprising, among others, linked drug-dispensing and hospital records of >2 million inhabitants in The Netherlands, new users of AHT were identified in the period 1993–2002. Persistence with AHT was determined by summing the number of days of continuous treatment (gaps between dispensings of <60 days). Patients were classified as persistent if they remained on AHT for at least two years. The outcome of interest was the first hospital admission for stroke occurring two or more years after initiation of AHT therapy. Patients were classified as high, intermediate or low cardiovascular risk based on other cardiovascular drug use and hospitalizations during the first two years of follow-up. **RESULTS:** The study included 98,485 patients of whom 16% were at high cardiovascular risk. About 50% (n = 48,548) of all patients were persistent with AHT for two years, and 2.1% (n = 2093) were hospitalized for stroke in the period of two or more years after initiation of AHT therapy. Multivariate analyses showed that non-persistent users of AHT had a 16%–19% increased risk for stroke compared to persistent users (Low/intermediate risk group RRadj = 1.19; 95% CI: 1.07–1.32; high risk group RRadj = 1.16; 95% CI: 0.97–1.39). **CONCLUSION:** In clinical practice antihypertensive drug treatment is used over too short a time interval to have maximum benefit from preventing stroke.

PCV6

NON-PERSISTENT USE OF ANTIHYPERTENSIVE DRUGS INCREASES RISK OF HOSPITALIZATIONS FOR ACUTE MYOCARDIAL INFARCTION BY 10% IN PATIENTS WITH LOW OR INTERMEDIATE CARDIOVASCULAR RISKBreekveldt-Postma NS¹, Siiskonen SJ¹, Penning-van Beest FJA¹, Erkens JA¹, Vincze G², Falvey H², Herings RMC¹¹PHARMO Institute, Utrecht, The Netherlands, ²Novartis Pharma AG, Basel, Switzerland

OBJECTIVES: Low persistence with antihypertensive drug treatment (AHT) may limit patient's benefits in terms of a reduction of cardiovascular and cerebrovascular disease. This study investigated the relationship between persistence with antihypertensive drugs and the risk of acute myocardial infarction (AMI) in clinical practice. **METHODS:** From the PHARMO record linkage system comprising, among others, linked drug-dispensing and hospital records of >2 million inhabitants in The Netherlands, new users of AHT were identified in the period 1993–2002. Persistence with AHT was determined by summing the number of days of continuous treatment (gaps between dispensings <60 days). Persistent patients remained on AHT for two years. The outcome of interest was the first hospital admission for AMI occurring two or more years after initiation of AHT therapy. Patients were classified as high, intermediate or low cardiovascular risk based on other cardiovascular drug use and hospitalizations during the first two years of follow-up. **RESULTS:** The study included 98,485 patients of whom 16% were at high

cardiovascular risk. About 50% of all patients were persistent with AHT for two years and 1.5% was hospitalized for AMI in the period of two or more years after initiation of AHT. Multivariate analyses showed that non-persistent use of AHT increased the risk for AMI in the low/intermediate risk group (RRadj = 1.12; 95% CI: 0.99–1.28), but not in the high risk group (RRadj = 0.90; 95% CI: 0.73–1.10). **CONCLUSION:** In clinical practice antihypertensive drug treatment is used over too short a time interval to have maximum benefit for preventing AMI in patients with low or intermediate cardiovascular risk.

PCV7

RELATIONSHIPS BETWEEN VENOUS THROMBOEMBOLIC (VTE) PROPHYLACTIC TREATMENTS AND VTE COMPLICATIONS OR THROMBOCYTOPENIA AND AMONG VETERANS RECEIVING TOTAL HIP REPLACEMENTS

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OBJECTIVES: To compare rates of venous thromboembolic (VTE) complications and thrombocytopenia by VTE prophylactic treatments, among Department of Veterans Affairs (VA) patients receiving total hip replacement (THR). **METHODS:** From the VA national databases, we identified all THR patients between March 2003 and March 2004. Using inpatient and outpatient data; we collected demographics, diagnoses, health care utilization, and VTE prophylactic strategies for each patient. We followed patients for 1 year post-surgery, applying diagnostic codes to identify VTE complications (deep vein thrombosis (DVT)), pulmonary embolism (PE), post-thrombotic syndrome (PTS), and thrombocytopenia. Using logistic regression; controlling for age, gender, obesity, congestive heart failure, and cancer; we compared VTE complications and thrombocytopenia by VTE prophylaxis (reference = enoxaparin alone). **RESULTS:** We found 1722 THRs with VTE prophylaxis: enoxaparin = 1005 (58.4%), warfarin = 345 (20.0%), dalteparin = 205 (11.9%), and the combination of enoxaparin with warfarin (enox/warf) = 167 (9.7%). Respectively, patients experiencing VTE complications (chi square p < 0.001) were: 26 (2.6%), 22 (6.4%), 5 (2.4%), and 34 (20.4%) or suffering thrombocytopenia (chi square p = 0.177) were: 6 (0.5%), 3 (0.9%), 1 (0.5%), and 4 (2.4%). Logistic regression revealed significantly greater (p < 0.001) VTE complications (odds ratio, 95% confidence intervals) with enox/warf (9.9, 5.6–17.2) or warfarin alone (2.6, 1.5–4.7) versus enoxaparin alone. Significant covariates were age (p = 0.016) and cancer diagnosis (p = 0.018). Treatment with enox/warf was associated with significantly (p < 0.001) more PEs, 4.8% versus 0.5% (10.6, 3.7–33.6). Treatment with enox/warf or warfarin alone was associated with more (p < 0.001) DVTs, 17.4% versus 2.2% (9.4, 5.2–17.1) and 5.2% versus 2.2% (2.5, 1.3–4.8). There were no cases of PTS. Logistic regression results for thrombocytopenia were not significant (p = 0.174). **CONCLUSION:** Warfarin and enox/warf were significantly less effective VTE prophylactic strategies following THR than dalteparin or enoxaparin. Potential limitations include the non-controlled, observational design, inclusion of primarily male VA patients, and constraints inherent in national VA data.

PCV8

RISK OF MYOPATHY ASSOCIATED WITH THE USE OF STATINS AND POTENTIALLY INTERACTING MEDICATIONS—A RETROSPECTIVE ANALYSISShah S¹, Shepherd MD², Barner JC², Wilson JP², Lawson KA²¹Bayer Pharmaceuticals Corporation, West Haven, CT, USA,²University of Texas at Austin, Austin, TX, USA

OBJECTIVES: Statins are the most widely used drugs for the management of hyperlipidemia and are generally well tolerated; however, statin-associated myopathy is a major clinical concern. The risk of myopathy further increases when statins are used concurrently with potentially interacting medications (PIMs). The purpose of this study was to evaluate the risk and risk factors of myopathy in patients using statins with PIMs compared to those patients using statins without PIMs. **METHODS:** The study was a retrospective cohort analysis using the Texas Medicaid database. The study population included patients who were new statin users between the ages of 21 and 64 years and were eligible for Texas Medicaid benefits between September 1, 1998 and August 31, 2003. The main outcome measures were incidence rates of myopathy per 100 person-months of treatment and odds of developing myopathy. **RESULTS:** In 8822 eligible patients, 113 cases of myopathy occurred during an average follow-up of 3.9 months. The overall incidence of myopathy in the study population was 0.32 per 100 person-months. Patients using statins with PIMs had a 2.7-fold (95% CI: 1.830–4.030) greater risk of developing myopathy than patients using statins without PIMs. In addition, increasing number of comorbidities was associated with 1.3 times (95% CI: 1.159–1.637) greater risk of myopathy. Also, the risk of myopathy decreased (OR: 0.997; 95% CI: 0.995–0.999) with increasing statin use. **CONCLUSION:** The risk of myopathy was higher for patients using statins and PIMs as compared to patients using statins without PIMs. Health care professionals should monitor patients closely when they use statins and PIMs concurrently, especially those with multiple comorbidities.

PCV9

ISOLATED SYSTOLIC HYPERTENSION IN A COHORT OF INNER CITY MINORITY PATIENTS

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OBJECTIVES: To study the prevalence and identify predictors of isolated systolic hypertension in a cohort of inner city hypertensive patients, predominantly African American. **METHODS:** The study cohort is composed of 327 hypertensive patients, enrolled in the NHLBI Baltimore Partnership Programs to Reduce CVD Disparities project. We defined isolated systolic hypertension as systolic blood pressure (SBP) ≥ 150 mmHg and diastolic blood pressure (DBP) lower than 90 mmHg. Potential predictors included in the logistic regression model are family history of cardiovascular diseases, self-perceived good health status, older age (65+) and being African American. **RESULTS:** About 10% (32 out of the 327) of hypertensive patients had isolated systolic hypertension at baseline. Patients over 65 ($p < 0.01$) and those who perceived their health status to be less than "good" ($p < 0.05$) were more likely to have isolated systolic hypertension. **CONCLUSION:** In this patient sample, the prevalence of isolated systolic hypertension is approximately 10%. Self perceived health status and senility are both significant predictors of having isolated systolic hypertension. These results may inform the management of hypertension to help improve blood pressure control rates.

PCV10

CLINICAL OUTCOME OF HYPERTENSION MANAGEMENT: A FIVE YEAR OBSERVATIONAL STUDY

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OBJECTIVES: The current study was: 1) to investigate the prevalence and extent to which the systolic blood pressure (SBP)

and diastolic blood pressure (DBP) of patients with hypertension deviated from the pre-defined treatment goals, and 2) to observe the association between the extent of deviation from target and the short-term prognosis of the patient. **METHODS:** Adult patients who were seen at the Prince of Wales Hospital outpatient clinic with the baseline period between January 1, 2000 to December 31, 2000 were recruited. Retrospective chart review was conducted for a period of 5 years. Recruited Patients had a primary diagnosis of stage I or II hypertension according to the JNC-7 guidelines; were on mono- or combination anti-hypertensive therapy; had never attended any nurse counseling sections or pharmacist concordance clinics. The primary outcome measurement was the prevalence, duration, and extent of SBP and DBP deviation from the treatment goals at baseline and at each study time point. The secondary outcome measurement was the number of incidences of cardiovascular diseases (fatal or non-fatal myocardial infarction, congestive heart failure, angina pectoris) and cerebrovascular events (stroke), the number of coronary procedures performed, and the mortality from all cardiovascular or cerebrovascular causes, and the total mortality at each study time point. **RESULTS:** A total of 1367 patients were identified. To date, 157 patients' charts were reviewed (age range: 21–78 years old; mean age: 52.79 years old). Over 30% of patients had a positive family history of coronary heart diseases. The SBP and DBP were not control over 40% of the study time period in 55.4% and 35% patients respectively. The total event rate for the 5-year period was observed in 48 patients (30.6%). **CONCLUSION:** Overall antihypertensive management was encouraging but there is room for improvement.

PCV11

THE EFFECTS OF SEASONAL VARIATIONS AND WEATHER CONDITIONS ON THE OCCURRENCE OF HEART ATTACKS IN HUNGARY BETWEEN 2000–2004

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OBJECTIVES: The spatial and temporal changes of weather factors depend on geographical location, seasons and the time of the day. The onset of acute myocardial infarct (AMI) shows certain circadian rhythms and seasonal variation, which are influenced by sex, age and the changes of the weather as well. Our study examines the relationships of meteorological factors and the incidence of AMI. **METHODS:** A retrospective analysis of patients diagnosed with AMI between 2000 and 2004 in Hungary ($n = 81,956$ patients) was carried out. Data were derived from the National Health Insurance Fund Administration (OEP) containing routinely collected financial data. Whenever the same patient occurred in the database several times, it has been considered as a separate case. Weather related data were provided by the National Meteorology Service (OMSZ). **RESULTS:** A peak period of the occurrence of AMI was found during spring, while minimum number of events was recorded during summer. Significant difference was observed between the number of events each season ($F = 34.741$; $p < 0.001$; $N = 81,956$). A medium level negative correlation was found between the monthly average temperature and the occurrence of AMI ($r = -0.404$) during the period examined. A positive correlation was shown between front movements and the number of events per season ($r = 0.053$). Average barometric pressure changes, the number of front movements and the number of AMI events also showed a nearly similar seasonal deviation. **CONCLUSION:** Our findings show that certain meteorological factors may be related to the onset of AMI, however other factors also play an important role.